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ABSTRACT

In September 1971, the members of the Educational Planning Committee of Ferris State College held a seminar to determine Ferris priorities for the 1971-72 academic year. This document takes into consideration the first of these priorities--the educational responsibilities and missions of Ferris State College. To this end, the document is divided into 6 major sections. The first contains the Ferris role statement and discusses some implications for the future of the college. The second section deals with the disadvantaged student at Ferris and his academic needs, and the third discusses the advanced student and a possible 3-year degree program. The fourth section describes educational programs for those with leisure time, the fifth describes programs for career change, and the final section describes the Common Learning Model which is a common core of learning basic to all Ferris disciplines. Other documents planned by the Educational Planning Committee will pertain to the role of student-faculty morale in the Ferris educational program and ways of enhancing or strengthening program planning. (HS)

ED 068037

THE FERRIS EDUCATIONAL MISSION
OBLIGATIONS AND DIRECTIONS

ED 068037

FERRIS STATE COLLEGE
BIG RAPIDS, MICHIGAN

To: Recipients of the Educational Planning Committee Report

From: Edward M. Griffin, E.P.C. Chairman, 1972-73

Subject: Report of the Educational Planning Committee Report, Obligations and Directions

Date: September 20, 1972

A copy of the Educational Planning Committee report entitled "Obligations and Directions" is enclosed. It is the desire of the committee that the report be made available to all interested persons for study.

The committee encourages readers to respond to the report through the respective school representatives on the committee or directly to the chairman.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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HE003480

THE FERRIS EDUCATIONAL MISSION

A Continuing Study by the Ferris Educational Planning Committee

Part I.

OBLIGATIONS AND DIRECTIONS

Spring, 1972

FOREWORD

In September 1971, the members of the Educational Planning Committee held a retreat to determine the most pressing subjects pertinent to the Ferris educational mission to which they should address themselves during the 1971-72 academic year. In subsequent meetings, the following areas were identified and outlined, then allocated to particular members for study and analysis:

a firm statement of the Ferris educational responsibilities and mission,

the role of student-faculty morale in the Ferris educational program,

and enhancing or strengthening program planning.

The work plan envisaged all committee members concentrating on each of the three areas in turn. Upon completion, each a document would be issued with the hope that such comment as might be elicited from the readers might have helpful relevance to the preparation of the subsequent portions.

The present subject, "Obligations and Directions," was originally five sections, loosely designated as (1) the 1971 Ferris Role Statement, (2) the characteristics of the student currently accepted at Ferris and his academic needs, (3) the community colleges as a base for two-year programs and the three-year degree program, (4) education for leisure time, (5) a common core of learning basic to all Ferris disciplines.

In the course of writing and editing Section IV, Education for Leisure Time, there came the realization that groups, other than the leisured or retired, are in need of the services of a college such as Ferris. As these other groups came into focus, it was realized that a new section was required to pay adequate attention to their particular needs--thus Section V, Education for Career Change, was developed.

Recommendations

Recommendations follow each of the sections. These are rearranged in a final addendum according to the school or school officer for which, or to whom, each recommendation has the greatest pertinence.

Authors and Editors

The authors of the various sections were:

I. The Ferris Role Statement and Implications for the Future

Drs. Orr, Wigglesworth

II. Disadvantaged Students

Dr. Milton, Mr. Nelson

III. Advanced Students

Dr. Bahnsen, Prof. Brejcha, Dr. Rankin, Prof. Sampson, Dr. Swartz

IV. Education for Leisure

Drs. Bahnsen, Griffin, Osowski

V. Education for Career Change

Dr. Bahnsen, Prof. Sampson, Dr. Wigglesworth

VI. The Common Learnings Model

Dr. Storm

The sections were edited by a sub-committee composed of Dr. Rankin, Prof. Sampson, and Dr. Wigglesworth. Dr. Johnson assisted this committee with suggestions and editorial assistance and was a valuable resource for the entire committee throughout the project.

SECTION I

THE FERRIS ROLE STATEMENT AND IMPLICATIONS FOR THE FUTURE

Preface

The purposes of this section are to review the present Ferris Role Statement with reference to current programs, to relate these programs to the 1980 employment projections of the U.S. Department of Labor and those stemming from the National Goals Statement of the federal government, to observe the characteristics of the present Ferris student in relation to the Role Statement, to note some of the current social trends which might affect the role of Ferris in the coming decade, and, finally, to make recommendations indicated by the material presented. Because of the importance of manpower projections to any school oriented to technical, professional, and business training, additional employment and population projections are reported in appendixes.

The Role Statement

The current official document entitled, "Ferris State College's Role in Michigan's System of Higher Education," comports closely with the previous role statements which were prepared by Ferris administrators and were based on the then current programming and legislative requirements. It can, then, safely be taken to reflect the generally accepted concept of the role of Ferris.

There is in the document, however, one statement which, in view of the present and future developments in the fields serviced by Ferris, arrests ones attention. On page six one reads, "Ferris State College is an undergraduate institution which does not aspire to achieve university status."

This statement appears (in somewhat different form) in 1963 legislation that approved the name change from Ferris Institute to Ferris State College and which states also that Ferris should "continue to operate in accordance with the policies and curricula established through the years." The statement is both unnecessary and negative. Several of the disciplines which are included in the Ferris programs are very volatile in nature, changing swiftly, upgrading in many instances, and in the future might require a mode of presentation which could demand university status. Already this would appear to be true of the Schools of Education and of Health, Sciences and Arts.

The remainder of the role statement and the on-going programs at Ferris exhibit no inconsistencies. Indeed, both the document and the reality demonstrate an admirable adherence to the spirit of practical education which has powered Ferris from its founding.

Approaches to Program Development

Before attempting human resource forecasting, consideration should be given to the spectrum of goals of American colleges and universities at the present time, Peterson, in a 1971 pilot study,[1] developed 22 goals areas which he divided into 13 "output goals," and 9 "support goals" to comprise a theoretical framework which he refers to as an "Institutional Goals Inventory" (IGI).

These goals are:

Output Goals

1. Academic Development (acquisition of knowledge, academic mastery, etc.)
2. Intellectural Orientation (as an attitude, style, commitment to learning, etc.)

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[1]Western Regional Conference on Testing Problems, Proceedings, 1971, Berkley, California; Educational Testing Service, 1971. Peterson's full title of his list is, "A Tentative Conceptualization for the Revised Institutional Goals Inventory."

3. Individual Personal Development (of ones unique human potential, etc.)

4. Humanism/Altruism (idealism, social concern, etc.)

5. Cultural/Esthetic Awareness (appreciation, sensitivity to the arts, etc.)

6. Traditional Religiousness

7. Vocational Preparation

8. Advanced Training (graduate, professional)

9. Research

10. Meeting Local Needs (community public service, etc.)

11. Public Service (to regional, state, national, international agencies)

12. Social Egalitarianism (meeting educational needs of people throughout the social system)

13. Social Criticism/Activism (toward change in American life)

Support Goals (internal college goals intended to help realize the "output" goals)

14. Freedom (academic, personal)

15. Democratic Governance (emphasizing structural factors)

16. Community (emphasizing attitudinal factors: morale, spirit, ethos)

17. Intellectual/Esthetic Environment (intellectual stimulation, excitement, etc.)

18. Collegiate Environment (extracurricular activities, social life, athletics, etc.)

19. Innovation

20. Evaluation and Planning

21. Accountability/Efficiency

22. External Relations (toward understanding and mutually beneficial relations between campus and external constituencies)

The relative importance of these goals for "Is" and "Should Be" along a five-point scale as viewed by faculty, students, and others were studied by Peterson. Appendix IV presents the IGI rankings as determined by faculty, students, and trustees, on a "Should Be" basis at an independent liberal arts college as an illustration of the study.

One might view the 22 goal areas of the Peterson Institutional Goals Inventory as institutional variables the priorities of which vary with the respective institution's perception of the total needs of society. An understanding of the future projections of human resources and employment availabilities, as well as the theoretical structure of the Peterson IGI, should assist any institution to translate effectively its role statement into educational programs which reasonably fit the projections.

As to such projections, two different approaches can be utilized in considering human resources. One approach is that of the Bureau of Labor Statistics' Input-Output model; the other is based on the establishment of National Goals by the federal government and the calculation of personnel and money required to accomplish them. Both methods are presented in the following paragraphs.

The Bureau of Labor Statistics Model

The Bureau of Labor Statistics (BLS) has made a systematic set of projections of the U.S. economy to 1980 which include estimated manpower requirements by occupation. These bulletins comprise an Input-Output model reporting explicit economic and employment targets, industry by industry, for the total system.

The Model is based on three assumptions: (1) an economic growth rate of 4.3 percent per year; (2) a total labor force of 100,727,000 by 1980;

(3) a three to four percent unemployment rate. Although the Commission on Human Resources and Advanced Education report[2] pointed out that, while the input-output data comprise the best available basis for studying manpower projections, they do not allow for alternatives about changes in the economic growth and unemployment rates. The National Goals model does provide for such changes.

[2]John K. Folger, Helen S. Astin and Alan E. Bayer, Human Resources and Higher Education; 1970, Russell Sage Foundation, New York, N.Y. Passim.

The following listing shows the BLS projections of selected professional and related occupations that relate to some current and approved curriculums at Ferris.[3] Not all programs can be identified with specific employment projections, and projections are not provided in some specific curriculums, for example, in the various major areas of secondary school teaching.

Baccalaureate Programs	Percentage increase 1968-1980
Accounting	43.4
Advertising	8.1
Data Processing	129.0
Environmental Health	41.0
Health Services Management	46.7
Insurance	16.9
Management	42.9
Law Enforcement and Criminal Justice	27.5
Medical Technology	90.0
Pharmacy	7.0
Surveying	13.5
Associate Degree Program	
Auto Body Repair	25.0
Automotive Service	21.1
Commercial Art	13.0
Data Processing	129.0
Dental Assistant	50.0
Dental Hygiene	109.4
Dental Laboratory Technology	38.9
Environmental Sanitarian Assistant	41.0
Executive Secretarial	36.8
Health Optics	4.5
Heavy Equipment and Diesel Repair	18.2
Higher Accounting	43.4
Journalism	21.6
Library Technician	77.1
Machine Tool	12.5
Nursing	51.5
Radio-Television Service	16.0
Technical Drafting and Tool Design	48.1
Certificate Programs	
Business Office Assistant	36.8
Vocational-Business Studies	39.4
Welding	40.6

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[3] Occupational Manpower and Training Needs, Bulletin 1701, U.S. Department of Labor, Bureau of Labor Statistics, U.S. Government Printing Office, 1971; Table B-1, pp. 67-74.

An additional projection, shown in Appendix I, of this section, presents the 1980 employment estimates in whole numbers for 1968 projected to 1980 and the percentage change.[4] These have been classified according to the several Ferris schools. A summary classification has been added to show the occupations which are expected to grow rapidly, and those which will grow slowly.

The projections shown in Appendix I confirm the importance of the Ferris role for, from the table of selected employments, numbering some 80 job categories, 60 were directly applicable to one or another of the six Ferris schools.

In appendix II, is shown a number of BLS 1980 employment projections which are not currently included in any Ferris program but which might suggest programs of courses for future development.

The results of a study by the National Education Association (NEA) are shown in Appendix V to enable the reader to obtain a better perspective on the beginning teacher supply-demand situation. In summary, the Appendix V projections indicate that while the number of certified secondary school teachers is greater than the number of jobs available, there are still shortages in the programs offered at Ferris including the sciences, mathematics, trade, industrial, and technical areas.

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[4]The U.S. Economy in 1980, a Summary of BLS Projections, Bulletin 1673 U.S. Department of Labor, Bureau of Labor Statistics, U.S. Govt. Printing Office, Washington, D.C.; Table A-25, p. 58.

The National Goals Model

The national goals model, which studies human resources in supply-demand projections tied to 16 national goals, is well described by Lecht in Manpower Needs for National Goals in the 1970's.[5] Fifteen of these goals were originally listed in 1960 by the President's Commission on National Goals and one was added by President Kennedy in 1961 (Space Exploration). The 16 national goals are:

1. Agriculture
2. Area redevelopment
3. Consumer expenditures
4. Education
5. Health
6. Housing
7. International Aid
8. Manpower retraining
9. National defense
10. Natural resources
11. Private plant and equipment
12. Research and development
13. Social welfare
14. Space exploration
15. Transportation
16. Urban development

[5]Leonard A. Lecht, Manpower Needs for National Goals in the 1970's. Frederick A. Praeger, Publishers, New York, N.Y., 1969.

The National Goals are to be accomplished with the aid of money and manpower. Specific occupations are related to the National Goals and one occupation may be involved with several of the goals. As the goals change with the priority assigned, manpower requirements change. For example, the manpower requirement per one billion dollar expenditure for urban development would generate employment for many more blue collar workers and fewer professional workers than the same amount of money allocated for health and education.

In considering both the Bureau of Labor Statistics Input-Output model and the National Goals model, one would also consider the distinction between need and social ideals (what people feel ought to be done) and the economic realities of demand (what people are able to pay for). Also, another consideration is the fact that our educational system produces for some work areas more college graduates than are required for replacement and continued growth.[6] However, this surplus, distressing as it may be in individual cases of continued unemployment or the taking of alternative employment to that for which the person was trained, may well have added to the upgrading and productivity of the various industries in which the graduates were placed.

Lecht projects his analysis of the input of national goals, as they stood at the time of his study, into specific areas of employment but limits himself to three classes of effect (high, moderate, low) rather than to attempt specific numerical projections.[7] These projections follow:

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[6]Folzer, Astin, and Bayer, op.cit. p. 41.
[7]Leonard A. Lecht, op.cit., pp. 36, 37.

Occupational Growth Profile, 1964-1975
Related to Ferris State College Programs

High Growth Occupations

School of Business

Cashiers (banking)
Managers
Office Machines Operators
Personnel and labor-relations workers
Secretaries and stenographers

School of Health Sciences and Arts

Dentists (dental assistants)
Nurses, Professional
Physicians and surgeons
Technicians, medical, dental
Nurses, Practical
Attendants, hospital and other institutions

School of General Education

Natural scientists
Social, welfare, recreational workers
Policemen, sheriffs, marshalls

School of Technical and Applied Arts

Librarians
Airplane pilots and navigators
Architects
Designers and draftsmen
Technicians, electrical, electronic, other
Barbers, hairdressers, cosmetologists
Cooks (food supervision)

Moderate Growth Occupations

School of Business

Accountants, auditors, bookkeepers

School of Pharmacy

Pharmacists

School of Education

Teachers, elementary, secondary

School of Technical and Applied Arts

Electricians
Foremen (jointly with the School of Business)
Machinists and job setters
Mechanics and repairmen, auto
Mechanics and repairmen, other
Toolmakers, diemakers, setters
Welders and flame cutters

Low Growth Occupations

School of Business

Insurance and real estate agents and brokers
Salesmen and sales clerks, retail

School of Technical and Applied Arts

Linemen, servicemen, telegraph, telephone, power
Printing craftsmen

Additional Sources, Manpower Information

The United States Training and Employment Service (USTES) of the Department of Labor assembles economic data pertinent to national state, and local employment conditions, "...which, in published form provide government, labor, management, and the public with information of value in assessing economic trends and developments." It also helps state employment service agencies, among other services, "...to develop and interpret national policies and goals," and to develop techniques for occupational analysis. From the work of this agency has been derived the Dictionary of Occupational Titles, and occupational job descriptions.[8]

Another source of information for school administrators, faculty program planners and any other persons or groups interested in trends in career areas and general employment is the Occupational Outlook Quarterly, a career guidance magazine published by the Department of Labor's Bureau of Labor Statistics.[9]

For updating with reference to the Lecht projections and other information with reference to the National Goals concept of manpower projection, the Center for Priority Analysis, National Planning Association, Washington, D. C. should be contacted.

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[8]United States Government Organizational Manual, 1971/72, Office of the Federal Register, National Archives and Records Service, General Services Administration, Washington, D.C., p. 298.

[9]Contact the Bureau of Labor Statistics, regional office: 300 South Wacker Drive, Chicago, Illinois, 60606.

The BLS and Lecht Projections, Comment

At their mathematical best, projections are still subject to the infinite changes which characterize society at any time. This is especially true for the United States which now stands at a crossroads of profound change in both its internal and external social and economic structures. Comfortable as it might be to accept the foregoing statistics and classifications for future employments, planners must be aware that much caution must be observed in placing too much confidence in them.

That national goals are changing rapidly is evident to all who read. And firm as the postulates and assumptions, which form the basis for the BLS projections, appear to be, these are not firm when subjected to a brief scrutiny.

The BLS postulates[10] of special interest to educational planners are:

1. The educational level of the labor force (in total) will have risen substantially.
2. The number of work hours per week will have declined to 38.
3. Employment will have continued the trend towards service occupations, including trade and government.
4. The long-term trend toward white-collar employments will have continued, emphasizing those needing the most education and training.

And the more important of the assumptions[11] are:

1. Improvement in the international political climate which might allow some reduction in defense expenditures.
2. The institutional framework of the American economy will not change radically.
3. Current economic, social, technological and scientific trends and developments will continue including values placed on work, education, income, leisure.

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[10] The U.S. Economy in 1980, op.cit., p.1. Only those postulates and assumptions most pertinent to the subject were included.

[11] Ibid., p. 2

4. Fiscal and monetary policies will be able to achieve a balance between low unemployment rates and relative stability without slowing long-term economic growth.

5. More funds will be channelled by Congress to state and local governments.

6. Solving ecological problems might take more of the nation's resources but will not lead to dampening "long-run rates of growth."

7. Fertility rates will be lower than they have been in the recent past.

While each of the above assumptions can be challenged by every reader, already events are beginning to show them to be indeed rather unstable. For example, the first (that defense expenditures will be reduced) has already been disproved by the proposed increase in the 1972-73 budget amount for defense which, in contradiction to the assumption, is increasing rather than the opposite as the international political climate warms up and forces are being withdrawn from Viet Nam. The second (no radical change in the framework of the American economy) is a matter of which part of the framework one is considering. Certainly regional attitudes towards industrial plant establishments and their environmental effects are changing rapidly. The third (current trends and social values will continue) is too vague and noncommittal. One must know which trends and values are referred to. The fourth (a balance can be achieved between low unemployment rates and economic stability) is being disproved daily as unemployment refuses to recede while prices rise in spite of limited price controls. The fifth (more federal funds available) is also dubious. Current administration practices regarding national government income-sharing with the states and localities demonstrate the opposite. Furthermore, at a time when greater public demands for welfare, education, ecological improvement, and a host of other services are being made, a ground-

swell of tax revolt appears to be gathering, and a further increase in the federal deficit confounds inflation control.

As for the sixth (ecological problems will not slow growth), ecological change must come basically from industrial investment and secondarily from public expenditure with the amounts spent by industry being deductable from tax liability thus reducing federal and state income. But industry, caught between union demands and intense domestic and foreign competition (all of which can be expected to increase), cannot logically be expected to make the prodigious efforts needed unless it reduces operations by closing offending plants and thus creating more unemployment.

Ultimately, employment depends upon the establishment of more business enterprises of all kinds. This implies growth. But growth is currently being questioned. Many see it as leading to a magnification of contemporary problems leading to disaster.[12] Others reach the same conclusion but by differing routes. Toffler[13] offers the thesis that society has already moved out of the industrial age into the super-industrial age distinguished from its predecessor by the possibility of technological production so effective that, "... many machines will be synchronized to the billionth of a second," and, as a consequence, man, becoming relatively useless, can be de-synchronized, useless, as far as all routine technological design, control, and operations relative to production are concerned. "It portends the break-down of the hierarchically bureaucratic system of management of the industrial age (and)...the corresponding acceleration...in the decision-making process." Toffler holds that current education is for an industrial age already past.

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[12]For one example see Time magazine, "The Worst is Yet to Be?" Vol. 99, No. 4, Jan. 24, 1972, pp. 32, 37. The significance of this article lies in the scientific method utilized for projection and the quality of the person involved.

[13]Alvin Toffler, "Learning to Live With Future Shock," College & University Business, Sept. 1971, p. 56. This article is one of several included in a special supplement to this issue -- "Toward the Learning Society: 1996 A.D."

"Today society needs an educational approach that is the antithesis of the one developed for industrialism, and the young people are somehow almost instinctively aware of this."

In short - the statistical projections, firm as they now appear, may, before 1980, have changed in such a manner that the employments now operative and identified in the BLS projections, might perhaps no longer exist or be drastically altered from present forms and requirements. This suggests that the national goals model (projecting from current government spending emphasis on one or another of the 16 national goals) might, despite its vagueness, be a surer method than the BLS statistical approach. There is one other--the private, rigorous study of contemporary social and technological trends.

The seventh assumption (that the fertility rates will be slower) may well be correct but as far as 1980 employment is concerned, "...everyone who will be old enough to work during the 1970's has been born already and death rates and net immigration are fairly steady."[14]

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[14]The U.S. Economy in 1980, op.cit., p. 4.

Ferris Objectives and Student Input

In looking at the role statement to insure congruency of the output to projected requirements, the input of students must also be considered. What types of students come to Ferris?

In the following tables some of the characteristics of the Ferris students are portrayed. It is recognized that there are many other characteristics than those identified below, but the ones presented are those which touch upon intellectual ability, social background, and previous educational exposure and have a reasonable substantiation in previous studies.

TABLE I

Scholastic Achievement Scores
(Profile of a sample of 1,531 P.E. Students, Spring 1969)

	Male		Female	
Averages	43N White	43N Black	48N White	45N Black
GPA	2.4	1.9	2.4	1.8
SCAT	60.0	45.0	62.0	39.0
English	46.0	35.0	52.0	27.0

Attrition at Ferris State College, July 1969
(N=number)

A detailed explanation of the profile may be found in the Task Force Committee report, Attrition at Ferris State College, July 1969.

Additional quantitative data on intellectual abilities are shown on the following page in Table II which compares ability test scores for 1965-66 with 1971-72:

TABLE II

School and College Ability Test Scores
For Entering Classes from 1965 to 1971

Test	Percentile	1965-66	1971-72
SCAT VERBAL	75th	34.0	34.0
	50th	28.0	28.0
	25th	22.5	21.8
SCAT QUANTITATIVE	75th	39.5	34.5
	50th	33.0	26.9
	25th	26.5	19.8
SCAT TOTAL	75th	7[illegible].5	66.8
	50th	6[illegible].0	55.1
	25th	51.0	43.5
NUMBER		2,399	3,080

Ferris State College Counseling Center

A glimpse into the socio-economic backgrounds of Ferris students is provided in the following table:

TABLE III

Socio-Economic Factors

	Male		Female	
Averages	43N White	43N Black	48N White	45N Black
High School Size 1 (rural) to 9 (large city)	6.0	7.2	6.1	8.3
Socio-Economic Status 1 (high) to 7 (low)	4.0	5.0	3.7	4.8

Attrition at Ferris State College, July 1969

Verterans comprise 11 per cent of the students (1,052). Half of these are married. Six hundred thirty-one or 7 per cent are transfers from other institutions. Of these, 345 are transfers from Michigan business, community, and junior colleges; 63 are from business and technical colleges; and 223 come from other Michigan four-year colleges and universities or out-of-state institutions.

An examination of Tables I and II suggest the following observations:

1. The verbal ability of Ferris students, except for the lowest percentile, has remained constant since 1965-1966.
2. The quantitative ability of Ferris students has declined significantly since 1965-1966. Today's 75th percentile approaches the 50th percentile of 1965; today's 50th percentile approaches the 25th percentile of 1965.
3. The decline in the SCAT Total scores over the past few years can be attributed to the quantitative area.

The decline is possibly the result of a de-emphasis on mathematics in the high schools (i.e. fewer schools with requirements), rather than an overall decline in ability to learn. Otherwise, some change would be evident in the verbal area. It is worthwhile to note the degree of decline in quantitative ability in Ferris students as shown in Tables I and II for the indication of the need for remedial measures which is the subject of Section II of this study.

Another goal stressed by the role statement is a continuation program for community and junior college students. This would reinforce the ever-present need for the upgrading of various occupations through the attainment of higher skills and talents.

Will the transfer students change the educational mixture at Ferris? Some research has indicated that it will not. Knoell[15] found that students in two-year colleges with the best grades tended to transfer to the more prestigious colleges where they made lower grades than the non-transfer students. Lower groups transferred to state and teacher colleges where their grades were on a par with the "native" students.

In the same study it was noted that 45 percent of two-year transfer students from junior colleges received their baccalaureate degrees about two years later but that 31 percent were still enrolled.

Project Talent[16] five-year follow-up figures were similar: 49 percent of the junior college transfers graduated from a four-year college, 32 percent dropped out after transferring, and 28 percent were still enrolled.

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[15]Dorothy M. Knoell and Leland Medsker, Factors Affecting the Performance of Transfer Students from Two to Four Year Colleges. USOE Cooperative Research Project No. 1,133, University of California at Berkley, 1964, p. 177.

[16]Folger, Astin, and Bayer, op.cit., p. 174.

Summary and Conclusions

There are two guides to determining specific manpower needs within the requirements of this project: the BLS Input-Output Models and the national goals concept. The former is specific, the latter, general. In a specific situation they should, perhaps, be combined: choose the national goal pertinent to the Ferris role, check this or these with the goal emphasis of the national and state governments, then work with the BLS Input-Output Model to determine possible job requirements, keeping in mind all contemporary social and technological trends.

A major conclusion to be drawn from the Bureau of Labor Statistics Input-Output Model projections for 1980 is that there will be a continuing shift toward white collar and service occupations from 1968 to 1980. The Ferris role statements of the past and the newly revised statement are all in agreement with the conclusion.

A major conclusion to be drawn from the National Goals method of forecasting employment projections is that as priorities of the various goals are changed there is a corresponding shift in employment patterns. For example, there is a shortage of engineers yet there is a surplus of aerospace engineers because of a change of priorities. Surplus aerospace engineers must train for some other engineering specialty in great demand. The Ferris role statement offers such a concept of flexibility as well as that of the college providing service to business and industry in rendering in-service, refresher training and upgrading educational experiences at the applicable level in its special areas of interest.

While the characteristics of the Ferris student, as the individual reader perceives them through the above tables and paragraphs, may not be as impressive, scholastically, as some might wish them to be, they do portray (to an admittedly slight degree) the kind of student for whom the Ferris role statement was conceived. The composite student and the role statement appear to be compatible - the role statement reflects a realistic approach for a vocationally-oriented educational institution.

The postulates and assumptions on which the BLS projections are based are firmly planted in the conditions and forms pertinent to the 1969-70-71 period in which they were made. The rapidity of contemporary changes may so alter the conditions and forms of society that the projections may well never eventuate. However, despite the seeming closeness of the impending changes, human institutions do have a way of evolving from one form into another so that, building on the past, one can encompass much of the new within the institutions of the old. It is therefore worthwhile to regard the BLS projections with a large measure of respect.

RECOMMENDATIONS

1. That any future version of the role statement be amended to delete negative or limiting words which refer to the aspirations of the college.

2. That in the development of new program proposals, program framers should consult the most recent Department of Labor manpower projections (identified in the foregoing pages), the current emphasis on the various national goals, and the other resources mentioned in this paper. Projections by individual professional societies should not be neglected.

3. That the present United States and world social and technological turbulence be fully recognized and studied by program framers for their implications for particular programs being proposed and that guidance be found in the Bureau of Labor Statistics postulates as cited in this study.

4. That, in considering future employments in relation to proposed programs, the program framer be warned to study carefully currently emerging facts being revealed by the ecological crisis: (1) the question of population control; (2) the cost to society of environmental improvement and its effects on all levels of business; (3) the questioning of economic growth itself as a public and private goal with implications for change in contemporary academic disciplines.

APPENDIX I

BLS PROJECTIONS OF EMPLOYMENTS TO 1980*

School of Business

The general Bureau of Labor Statistics (BLS) 1980 projections of business employments of college graduates (of business schools) are:

Categories	1968 Employment	1980 Requirement	% of Change
Managers, officials, proprietors	1,562,000	2,850,000	82.4%
Sales (employments)	463,000	780,000	68.4%
Clerical	583,000	779,000	33.6%
Legal Services (lawyers and legal secretaries)*	207,700	325,000	56.4%

The BLS 1980 projections of employment according to particular occupations are (college and non-college graduates):

Categories	1968 Employment	1980 Requirement	% of Change
Accountant	500,000	720,000	43
Personnel Worker	110,000	155,000	43
Public Relations Worker	100,000	165,000	64
Programmer	175,000	400,000	129
Systems Analyst	150,000	425,000	183
Managers, Officials, Proprietors	7,776,000	9,500,000	22
Bank Clerks	400,000	512,000	29

*The U.S. Economy in 1980, A Summary of BLS Projections, Tables 7, A-22, A-25, pages 35, 56, and 58-59 respectively.

Categories	1968 Employment	1980 Requirement	% of Change
Bank Tellers	230,000	337,000	46
Bookkeeping Workers	1,200,000	1,500,000	19
Cashiers	730,000	1,110,000	51
Computer Operators	175,000	400,000	129
Office Machine Operators	325,000	460,000	39
Receptionists	240,000	400,000	66
Shipping and Receiving Clerks	370,000	465,000	25
Stenographers and Secretaries	2,650,000	3,650,000	37
Typists	700,000	930,000	37
Sales Workers	4,647,000	6,000,000	29
Automobile Salesman	120,000	145,000	21
Insurance Agents and Brokers	410,000	480,000	17
Manufacturers' Salesman	500,000	735,000	47
Real Estate Salesmen and Brokers	225,000	270,000	20
Retail Trade Salesworkers	2,800,000	3,460,000	24
Security Salesmen	135,000	170,000	24
Wholesale Trade Salesworkers	530,000	695,000	30

Occupations expected to grow rapidly during the 1970's are:

Systems Analyst
Programmer
Computer Operator

Occupations expected to grow slowly during the 1970's:

Insurance Agents and Brokers
Bookkeeping Workers

School of Education

Categories	1968 Employment	1980 Requirement	% Change '68 - '80
Elementary School Teachers	1,230,000	1,270,000	3.3
Secondary School Teachers	940,000	1,065,000	14
College and University Teachers	286,000	395,000	38

Occupations expected to grow rapidly during the 1970's:

Mathematicians
College and University Teachers (moderately)

Occupations expected to grow slowly during the 1970's:

Elementary and Secondary School Teachers

School of General Education

Categories	1968 Employments	1980 Requirements	1968-1970 % Change
Chemist*	130,000	200,000	56
Physicist	45,000	75,000	64
Life Scientist	170,000	245,000	41
Oceanographer	5,200	9,700	85
Mathematician‡	65,000	110,000	60
Social Worker	160,000	270,000	67

Occupations expected to grow rapidly during the 1970's:

Oceanographer

Speech Pathologist and Audiologist

Social Worker

Physicist

*Also listed under Pharmacy.
‡Also listed under Education.

School of Health Sciences and Arts

Categories	1968 Employment	1980 Requirements	1968-1980 % Change
Dental Hygienist	16,000	33,500	109
Medical Lab. worker	100,000	190,000	90
Radiologic Technologist	75,000	120,000	60
Registered Nurse	660,000	1,000,000	52
Dispensing Opticians and Optical Mechanics	22,000	23,000	4.5
Speech Pathologist and Audiologist	18,000	33,000	83
Hospital Attendants	800,000	1,500,000	88
Licensed Practical Nurses	320,000	6,600,000	88

Occupations expected to grow rapidly during the 1970's:

Dental Hygienist
Medical Laboratory Worker
Hospital Attendant
Licensed Practical Nurse
Speech Pathologist and Audiologist

School of Pharmacy

Categories	1968 Employment	1980 Requirement	1968-1980 % Change
Chemist*	130,000	200,000	53.8

The BLS 1980 projections for employment in industry associated with the Pharmacy profession are:

Categories	1968 Employment	1980 Requirement	1968-1980 % Change
Pharmaceutical Preparations (mfgr.)	105,600	145,000	37.3
Wholesale and Retail Trade			
Drugs, Chemicals and Allied Products	221,000	275,000	24.4
Drug Stores	401,000	432,200	7.8

Occupations expected to grow most rapidly during the 1970's:

Pharmaceutical Preparations in Manufacturing

*Also listed under General Education

School of Technical and Applied Arts

Categories	1968 Employments	1980 Requirements	1968-1980 % Increase
Draftsmen	295,000	435,000	48
Guilding Trades			
Carpenters	869,000	1,075,000	24
Electricians	430,000	575,000	34
Plumbers	330,000	475,000	44
Air conditioning, Refrigeration and Heating Mechanics	100,000	140,000	40
Airplane Mechanics (Avionics)	135,000	230,000	70
Business Machine Servicemen	115,000	200,000	74
Industrial Machinery Repairmen	175,000	220,000	26
Motor Vehical Mechanics	825,000	1,000,000	21
Compositors and Type-setters	190,000	180,000	-5
Welders, Oxygen and Arc Cutters	480,000	675,000	41
Librarians	106,000	135,000	29
Cosmetologists	475,000	685,000	43
TV and Radio Service Technicians	125,000	145,000	16

Occupations expected to grow rapidly during the 1970's:

Business Machines Servicemen
Airplane Mechanics

Occupations expected to grow slowly during the 1970's:

TV and Radio Service Technicians
Carpenters
Compositors and Typesetters

APPENDIX II

EMPLOYMENT AREAS NOT COVERED BY FERRIS PROGRAMS*

The BLS bulletins contain many employment projections which are not covered by Ferris programs or at least not directly although some might be related or are currently covered under different titles. These are included to suggest possible new programs.

School of Business	1968	1980	% Growth
Public Relations Workers	100,000	165,000	64
Traffic Managers	15,000	17,000	10.4
Traffic Agents and Clerks	37,500	60,000	60.1
Hotel Managers	150,000	198,000	27.6
School of General Education			
Counseling Occupations			
Employment	5,300	10,800	102.3
Rehabilitation	12,000	21,000	72.6
School of Health Sciences and Arts			
Occupational Therapists	14,000	36,000	157.1
Dietitians	30,000	42,100	40.3
Hospital Administrators	15,000	22,000	46.7
Hospital Attendants	800,000	1,500,000	87.5
School of Technical and Applied Arts			
Business Machines Servicemen	115,000	200,000	73.9
Airline Dispatchers	1,200	1,600	33.3
Broadcast Technicians	20,000	23,000	14.9

*U.S. Department of Labor, Bureau of Labor Statistics, Occupational Manpower and Training Needs, Bulletin 1701, 1971, U.S. Govt. Printing Office, Washington, D.C., pp. 22-64, passim.

Flight Engineers	7,500	12,000	59.3
Ground Radio Operators and Teletypists	8,200	10,000	21.6
Pilots and Copilots	2,500	4,000	60.0

APPENDIX III

Population Projections
The Shift in Age Groups
(Millions of persons)

Category	1969	1980	Percent Change
Under 5 years	18.0	20.7	15.0
5 to 13 years	37.3	32.7	12.3
14 to 17 years	15.5	16.0	3.2
18 to 24 years	23.6	29.6	25.4
25 to 34 years	24.7	37.0	49.8
35 to 44 years	23.3	25.4	9.0
45 to 54 years	23.2	22.1	4.5
55 to 64 years	18.2	21.0	15.4
65 years and over	19.5	23.1	18.5
	203.2	227.7	12.0

Source: U.S. Commerce Dept.
*Reprinted from The Shape of the 1970's, The Morgan Guaranty Survey, November 1969, p. 4.

APPENDIX IV

TABLE 1: IGI (Institutional Goals Inventory) GOAL RANKINGS FOR THREE CAMPUS CONSTITUENT GROUPS

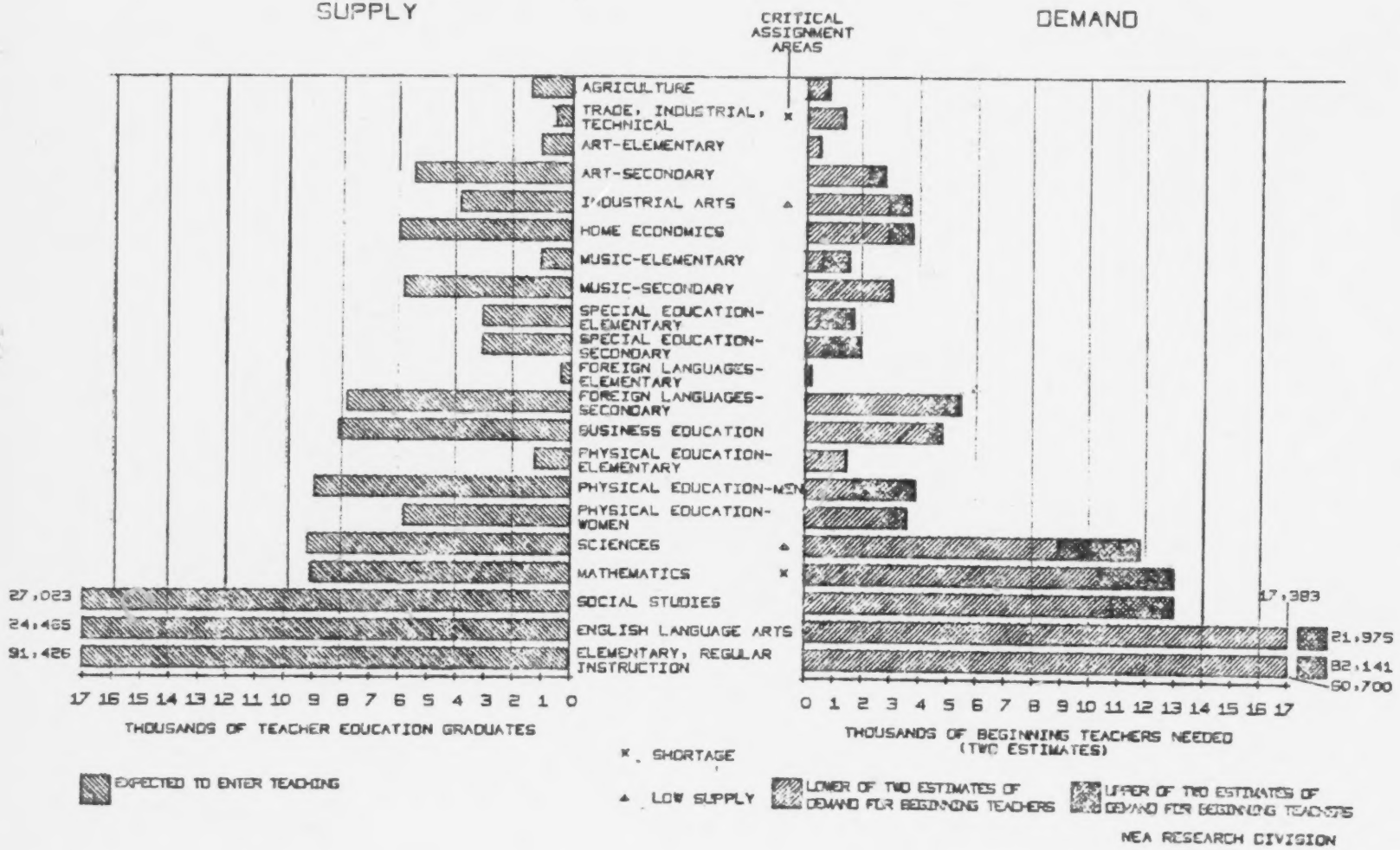
(An independent liberal arts college)

	Faculty (N=78)		Students (N=90)		Trustees (N=11)		Combined Constituenties	
Output Goal Areas	SH Be	R*	Sh Be	R	Sh Be	R	Sh Be	R
Academic Development	4.01	6	3.72	10	3.46	10	11.19	7.5
Intellectual Orientation	4.41	1	4.14	1	4.08	2	12.63	2
Iddiv./Personal Develop.	3.93	7	3.92	6	3.96	3	11.81	5
Humanism/Altruism	4.12	4	4.04	3	3.58	17	11.74	6
Cultural/Esthetic Aware.	3.34	11	3.53	11	2.94	15	9.81	13
Traditional Religiousness	2.07	22	2.04	22	2.74	16	6.85	22
Vocational Preparation	2.82	17	3.32	14	3.15	12	9.29	14
Advanced Training	2.06	21	3.12	17	2.57	18	7.85	20
Research	2.31	20	2.69	21	2.11	22	7.11	21
Meeting Local Needs	2.93	15	3.28	15	2.98	14	9.19	15
Public Service	2.77	18	3.07	19	2.47	20	8.31	19
Social Egalitarianism	2.85	16	3.17	16	2.51	19	8.53	18
Social Criticism/Activism	3.15	13.5	3.47	12	2.40	21	9.02	16
Process Goal Areas								
Freedom	3.76	9	3.90	7	3.31	11	10.97	10
Democratic Governance	4.05	5	3.95	5	3.82	6	11.82	4
Community	4.25	3	4.06	2	4.44	1	12.75	1
Intellectual/Esthetic Env.	4.30	2	3.98	4	3.95	4	12.33	3
Collegiate Environment	2.63	19	3.00	20	3.13	13	8.76	17

Innovation	3.80	8	3.88	8	3.47	9	11.15	9
Evaluation and Planning	3.68	10	3.84	9	3.67	7	11.19	7
Accountability/Efficiency	3.15	13.5	3.34	13	3.93	5	10.42	11
External Relations	3.26	12	3.08	18	3.65	8	9.99	12

SH Be = Should Be
* Rank
Source: Western Regional Conference on Testing Problems, Proceedings, 1971, Berkley, California; Educational Testing Service, 1971. Peterson's full title of his list is, "A Tentative Conceptualization for the Revised Institutional Goals Inventory."

SUPPLY AND DEMAND FOR BEGINNING TEACHERS, BY TYPE OF ASSIGNMENT, 1970



NEA RESEARCH DIVISION

SECTION II

DISADVANTAGED STUDENTS

Preface

Some students entering Ferris have inadequate backgrounds in one or more academic areas. Although this problem may diminish as the community colleges expand, there is no evidence that the problem will disappear in the near future. Thus, at this time, one of the most pressing needs is for the continuation and further development of present efforts to help educationally disadvantaged students.

Project Apollo

The Task Force recommendation of 1969 outlined a detailed plan which led to the establishment of Project Apollo. The intent of the recommendation was that Ferris establish a program which would implement such objectives as those later set forth by the Carnegie Commission in its special report entitled A Chance to Learn:

> The objective of more flexible admissions . . . is not to lower the quality of anyone's education. It is to give students additional opportunity and time to overcome factors limiting academic progress. Before any student is admitted to a college whose standard admission requirements he cannot meet, the college should estimate how far below the minimum standards he is, and ensure that the degree of its commitment to him, in compensatory resources, is potentially equivalent to the degree to which he falls below these standards.[1]

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1. A Chance to Learn: A Special Report by the Carnegie Commission on Higher Education, March, 1971. p. 14.

Limitations of the Project

The Apollo Project has now completed its second year of operation but inadequate implementation of the program and the present limitation of funds have restricted its development. Mr. Kenneth Humphrey, Director of Project Apollo, feels that too few faculty members realize that this program can and should provide supplementary instructional assistance to weak students pursuing any course or discipline in the college. Consequently, one need is more faculty awareness of the resources and advantages which Project Apollo offers all students.

If Apollo is to serve the needs of the students who come to Ferris marginally prepared for collegiate level courses for which reading, writing, and computational skills are a prerequisite, the project must be publicized, expanded, and more fully funded. The Project Apollo annual report for 1970-71 records that of the 89 original members, 65 attended three quarters at Ferris and their honor-point average changed from 1.88 in the Fall to 1.79 in the Winter (the first quarter in which nearly all courses were full-credit) and to 2.03 in the Spring Quarter. Apollo demonstrated its worth during the 1970-71 school year; it continued to prove its value in 1971-72

Need to Continue the Project

The records gathered thus far suggest that Apollo Project students are more likely to remain in school and more likely to achieve a 2.00 HPA in the third term than the non-project-affiliated but similarly disadvantaged students.

As increasing numbers of these students enroll at community colleges, the emphasis on remedial programs at Ferris will probably decline. Nevertheless, the problem exists this year and will continue to exist for at least

a few years more. Therefore we must inform students enrolled in remedial courses of the benefits available through Project Apollo. These young people have demonstrably better chances for success under the aegis of Project Apollo than without the assistance it makes available. As Medsker and Tillery have stated in Breaking the Access Barrier:

> Getting rid of students is not the way to educate them. Dismissing students because they cannot compete well with those who are brighter and better prepared may be acceptable at selective colleges. It is not the mission of community colleges.[2]

Nor is it the mission of "opportunity schools" such as Ferris. Project Apollo is helping to lower the risk and to break the access barrier but it needs expansion.

Tutoring Non-Apollo Students

One area of expansion should probably be to require Apollo students to take the remedial courses which prior testing indicates they need.[3] Permitting exceptions too often results in failure, confusion, and resentment. At present, recommendations are made but are not always implemented.

There are, of course, students at Ferris who are not "educationally disadvantaged" but are weak or inadequately grounded in the subject matter of a single course. The tutoring service of Project Apollo can provide the necessary help. Here, too, students supported by the tutoring service succeed more consistently than the students without such assistance.

There appears to be a need to explore and expand methods of teaching the educationally disadvantaged to utilize the resources of the classroom

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2. Leland L. Medsker and Dale Tillery, Breaking the Access Barrier, Report of the Carnegie Commission on Higher Education, 1971, p. 67.
3. One evidence of the value of these remedial programs comes from Donald Ferguson's report of January 3, 1972: "71% of the students completing the R-65 program, earned HPA's of 2.00 or over, hardly an HPA one might expect of low averaged students. Only 54% of these counseled to, but did not take the R-65 program, earned HPA's of 2.00 or over."

and of project Apollo simultaneously, enabling a student to pursue

> programs which encourage the student to develop at his own pace and in which his own progress, rather than adherence to a set schedule, becomes the criterion for success.[4]

Perhaps some courses could be restructured to meet the needs of ill-prepared students. Perhaps innovative courses can be designed which approach traditional subject matter in ways which draw heavily upon students' existing skills.

Recommendations

1. That Ferris be prepared, financially and programmatically, to serve adequately all students who are accepted for admission.
2. That the administrative officers study the desirability and appropriateness of requiring all students who have placement test scores below a particular level, or other evidence of need, to take recommended remedial studies.
3. That, to enhance its effectiveness, Project Apollo be expanded to a size commensurate with the need; and be publicized to all current and prospective students and to the faculty.
4. That the opportunity for college-supported tutoring be extended to all students who recognize the need for tutoring or for whom faculty advisors recommend tutoring.

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[4]The Open Door College: A Special Report by the Carnegie Commission on Higher Education, 1971, p. 22.

SECTION III

ADVANCED STUDENTS

Preface

Ferris State College must also accomodate "advanced" students, whether they are "advanced" because of previous collegiate work, comparable high school coursework, work experience, or individual study.

Ferris can best accomodate advanced students by (1) coordinating Ferris programs with similar programs at other colleges, (2) increasing the number of baccalaureate programs in which competence can be attained, even if that competence can be reached in less than four academic years.

Coordination of Ferris and Other College Programs

The loss of time in completing prerequisite courses at Ferris has sometimes delayed transfer students in meeting graduation requirements. This is an extra burden for students who transferred to Ferris from a community college or other institution.

An in-depth study is required to coordinate Ferris programs with those of other colleges, four year as well as community colleges. This coordination should promote acceptance of course work on an equal basis with Ferris offerings.

Admissions Policies

In conjunction with such coordination, the college should review its admission policies. The following admissions guidelines are proposed as being worthy of study:

1. Grant full admission only to students who have sufficient background to enter the program for which they applied.

2. Grant tentative admission to those who are borderline students and advise them before their first registration which areas require improvement.

3. Grant probationary admission to those who do not have a satisfactory background, and advise them of the areas in which they must improve and the time it will probably require to correct these deficiencies.

Evaluation of Credits

The several schools and departments at Ferris are currently working with the Admissions Office and community colleges to expedite easier student transfer. These activities vary from visits to the community colleges by Ferris faculty to inviting community college faculty and students to Ferris for Career Day visitation. This committee recommends that all Ferris programs should be coordinated with those of other colleges.

Expansion of Baccalaureate Programs

As the community colleges expand, the number of students entering the two-year programs at Ferris may decrease. As more students receive their Associate degrees from community colleges, the demand for "piggyback" programs, in which the baccalaureate degree may be earned, will increase. It is therefore suggested that more of these "piggyback" programs be designed.[1]

New Departmental Programs

If Ferris is to continue to serve Michigan "uniquely" and if Ferris is to offer more baccalaureate programs, then its several faculties must study the needs of its several disciplines and innovate new programs. Most of the best suggestions for new programs have come in fact from the faculties and the departments which teach and administer them.

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[1]This if the function of the Dearborn Center of the University of Michigan. Florida Atlantic University and Florida International University are ultimate "piggyback" colleges--each offers only junior-senior level and graduate level programs, coordinated to the offerings of many local community colleges. The Police Administration program at Ferris is an example of a "piggyback" program.

Reducing Time Requirements for Baccalaureate Programs

A student should be awarded the baccalaureate degree when he has reached an established level of competency - not when he has accumulated the credit hours and years of residency required to educate a fictional "average student." In short, if a student reaches competency in his studies early, he should be graduated early.

Students who deserve advanced standing, whether acquired at another college, in a high school course, on the job, or through independent study, should be awarded that standing. Furthermore, students who are capable of taking large credit loads should be allowed to graduate sooner, instead of being required to remain until they have fulfilled a time requirement.

Recommendations

1. That specific time requirements be removed from selected programs stressing the principle that graduation should be based on the attainment of proficiency and competence in the chosen subject area.
2. That students who pass comprehensive placement examinations for credit be awarded advanced standing on a campus-wide basis and that more students be encouraged to take advanced placement examinations.
3. That students of high ability be encouraged to "test" certain basic courses of a P/F basis and to carry extra courses, under faculty advisement, to enable them to progress faster.
4. That duplication of course work be eliminated by a more careful screening of proposed courses by the departments involved and by the committee on instruction.

5. That admission procedures be reviewed and revised so that marginal students are informed of the extent of additional course work they must take. It is also recommended that students who have a minimal chance of entering the program for which they are seeking admission either be denied admission or counselled to choose a program more compatible with their qualifications.

SECTION IV

EDUCATION FOR LEISURE

Preface

Changes in society are occurring at an ever-increasing rate with implications for education of an entirely different character than the pattern of the past would suggest.[1] One probable change which appears to be certain is the four-day work week as the norm. The increase in leisure for the worker and the steadily increasing number of early retirees will undoubtedly create an entirely new class of students. Both the younger and the over-sixty persons will be seeking new educational experiences. For some, it will be an entirely new approach to structured learning; for others, an opportunity to vary the fare to which they have become accustomed. The following paragraphs attempt to explore the possibilities with this new group in mind.

Background

The concept of education for the use of leisure time is a new challenge to educators. Historically they have directed their efforts towards such objectives as preparing students for work, for citizenship, for character-building, for knowledge and understanding of society, of family relationships, and of the entire spectrum of science and technology, as well as for the appreciation of intellectualism for its own sake.

Today, most workers enjoy shorter work weeks, longer vacations, earlier retirement, increased fringe benefits, and a guaranteed retirement pension. All of this indicates that the traditional tasks of educators must be expanded as this new responsibility is recognized--responsibility for using the school establishment to provide education for interesting and perhaps profitable use of leisure time.

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1. Note Section I, sub-heading, "The BLS and Lecht Projections, Comment."

The recognition of the need for a statement on "education for leisure" has a history. In 1918, for example, the Commission on the Reorganization of Secondary Education issued seven objectives for education, which became famous as the Cardinal Principles of Secondary Education. The worthy use of leisure is listed among the seven. The Education Policies Commission in its yearbooks of 1944 and 1952 Education for All American Youth and Education for All American Youth: A Further Look, respectively, denoted the following objective:

> All youth need to be able to use their leisure time well and to budget it wisely, balancing activities that yield satisfaction to the individual with those that are socially useful.

The publications serve as evidence that there has been for a long time concern about education for leisure as a part of the education of students at the foundation levels. The need, now, to acquire skills in the use of nonwork time, may cause a shift of educational gears especially toward programs relating to the development of personal interests in areas seldom considered proper for school attention.

Personal Interests

Interests are often mentioned in relation to educational objectives since they influence the career choice and therefore the educational program. Furthermore, interest tends to guide behavior in certain directions as opposed to others and in so doing reveals a person's nature.

The basic requirement of learning experiences designed to develop an interest area is that they must enable students to derive personal satisfaction from such experience. The student should have an opportunity to explore interest areas and to derive satisfaction from such exploration. Although there has been a considerable amount of research on interests,

there seems to be no firm conclusion as to whether interests change systematically with age.[2] In view of the foregoing, it seems reasonable to regard interests as being developmental in nature with basic exposure and trial being of prime importance.

The Ferris Program

The current Ferris Community Adult Education program functions squarely in this area, fulfilling this need for education in the use of leisure. Essentially what is transpiring in these courses is that people are using leisure time to learn, or they are learning how to use leisure time. The same class may serve the purposes of both groups. The college can expand this program to inculcate in an ever-widening circle of students a lasting desire for satisfying these purposes.

General Objectives of a Leisure Time Program

While there are many objectives to be achieved by the establishment of a program for the proper utilization of leisure time, a few can be suggested as perhaps having more pertinence than others to Ferris:

1. To further the philosophy of Ferris by providing unique, practical programs for all students in the utilization of leisure time.
2. To provide continuing educational services for area residents in the utilization of leisure time in the adult education program.
3. To recognize the increasing need of individuals for education in many areas because of the increase in their leisure time.
4. To plan educational experiences that will equip individuals to secure from leisure time the recreation for the body, mind, and spirit, that will enrich and enlarge their personalities.

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2. Education for All American Youth, Educational Policies Commission, National Education Association, Washington, D.C. NEA 944, p. 216.

These objectives call for the utilization of art, drama, athletic activity, literature and other forms of social intercourse, together with the fostering in each person of one or more special interests.

Program Content

Programs need not necessarily be in the academic disciplines. Indeed, administratively, they can be a continuum of the present Adult Education Program. Some examples are:

1. Continuing Education designed specifically to attract women. Many women, after the pressures of raising a family or of getting the children started in school, want to use their new "leisure" to prepare for a new career, or to take contemporary refresher courses that relate to a former one. They should be encouraged and accommodated. Also, an attempt should be made to construct programs and courses that would attract student wives.
2. The growing emphasis and interest in adult recreation on the ski slopes, the golf courses, and on the waters of Michigan, offer an opportunity for adult education programming in these areas. This could also be turned to account for part-time employment for, as shown elsewhere in this study, employment estimates for 1980 show a substantial increase in the group for workers in recreation.
3. The present Adult Education program at Ferris has earned a reputation for excellency in the areas served by the college. Expansion of this program with offerings during normal school hours should be considered; also, a gradual phasing in of degree programs might be possible. "Night" offerings may not be as acceptable to some as day instruction, but there are many persons who have no choice. The college should make it possible for this group to begin formal study in a discipline area.

Recommendations

1. That serious consideration be given to the growing need for education related to the use of leisure time. Such educational programming may include the study of serious and non-serious subjects within the Ferris educational framework--beyond what is now being provided in the Community Adult Education Program.

2. That all schools consider providing such education to the extent resources and program content permit and that the administration of such activity be lodged with the School of General Education.

3. That the current offerings in the Community Adult Education Program be expanded. Courses helpful to home and equipment maintenance and to family health, for example, could be added.

4. That within the concept of extension education, formal courses within the several disciplines offered in all the schools of Ferris be made available with or without stated certificate or degree objectives on the part of the student.

5. That consideration be given to the development of "vacation workshops" - workshops of two to four weeks designed to attract persons who want to prepare for some type of leisure-time activity.

Related Readings and Bibliography

Cardinal Principles of Secondary Education, Department of the Interior, Bureau of Education Bulletin 1418, No. 35, Washington, D. C., Government Printing Office, 1937, p. 9.

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SECTION V

EDUCATION FOR CAREER CHANGE

Preface

The educational programs at Ferris, may quite appropriately include training, or more properly, "retraining," in programs of a vocational and professional or semi-professional nature for a second career. The persons who might be interested would include all who are dissatisfied with their careers to the point of considering a change, or those whose careers may have been cut short through technological change.

Traditionally the "evening division" of the large urban university supplied with much success the retraining (and, in many cases, the first training) needs of this group. With the curricular and administrative reforms (especially in the business schools) following the Ford report[1] many schools moved these programs into their "extension programs" and, as a consequence, deprived them of their prestige in the eyes of the students. It was one thing to be attending a full-fledged, degree-granting university in the same building on the same campus as the day group. It was quite another thing to be shunted to a division entitled "extension," In the process, something was lost. But many, many colleges never recognized that the need existed. Thus, despite so many educational innovations in recent years, this group today appears not to be receiving the degree of recognition in a great many schools which it formerly had received very widely.

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1. Robert A. Gordon and James E. Howell, Higher Education for Business, Columbia University Press, New York City, 1959, passim.

The Group Identified

The number of persons in need of career training and retraining in this category are legion. However, a few large groupings can be distinguished. These are:

1. The retired and semi-retired who are not thinking in terms of leisure but of an entirely new pattern of work. As the retirement age lowers and the life-span lengthens, these people will become a greater percentage of our population.[2] A retired military officer, commissioned or non-commissioned, for example, might have had a life-time yearning to become some kind of a medical practitioner, and his degree of intelligence, plus experience, might well qualify him for new career training in much less time than normal for the program he chooses. This segment richly deserves the attention of program planners since productive results are almost a certainty.

2. The younger to middle-aged persons who are sufficiently dissatisfied with their careers to brave a complete change and are willing to stand all the costs which such a step might involve. This group may be vastly larger than has been suspected since the college program pattern is predicated on the making of a choice of program in the first or second year--frequently too early a date for a student to be fully aware of the nature of the career and the attendant course of study.

In this group one also finds those who have simply become bored with the career chosen. There are also those who find the field diminishing

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2. See Section I, Appendix III.

and fading beneath them; and those who recognize a deep-seated desire to do more purposeful, more socially-significant work. Persons in this category might require psychological as well as program counseling.

3. Those who have become the victims of technological change and must retrain as rapidly as possible. For these, the institution may offer programs which either build on the old technologies or offer training in a new or different area. A good example of such programs now in progress at Ferris is the expansion of the automotive programs, and the introduction of avionic and industrial electronics technology.

4. Those who have mastered their chosen fields, have reached the limit of development, and are seeking a new and more challenging career.

5. All who, at the formative stage of their lives, were not aware of the opportunities for upward movement, and who have since developed a desire for personal upgrading but are reticent and fearful of approaching the college, believing themselves to be too poorly prepared. Besides, they have to work every day to earn a living.

In this same group, most jobs require manual dexterity. There are probably many who are facing a growing physical disability which, sooner or later, will force them to seek a new kind of employment. One solution is for them to retrain in some field requiring a lesser degree of physical input.

Present Administrative and Program Limitations

Some of the limitations which persons in the above categories are likely to face in the schools to which they might apply are:

1. Entrance examination and other scholastic requirements which may disqualify the applicant, but which are not really germane to the type of work the retrainee would be doing after he enters his new career.
2. A programmatic orientation totally towards the young and which does not recognize the particular educational attainments of the applicant because they perhaps are not in the general area of the new field being chosen.
3. Insistence upon a time span which the retrainee cannot afford and which, if met, would lose for him precious time of service and remuneration.
4. Lack of classes held at hours convenient for the fully-employed person.

Some Possible Remedies

The above barriers are not to be presumed to be all present in every school nor that they exist in Ferris. Neither are they all the barriers that are encountered. Nevertheless the identification of these few suggests what measures might be taken to open the gates for the persons in these several categories. These are:

1. The adoption of a new approach by both administrators and teachers to the problems of education for a second-career; especially the recognition of, and capitalization on, whatever previous training the applicants might have had.
2. Providing information to persons in these categories as to the retraining possibilities through a sustained public relations-advertising campaign.

3. Modification of entrance requirements to suit the individual retrainee--applicant.

4. Creating as personalized a program as possible not only to utilize the applicant's education and past experience to the fullest but also to develop any latent talents which he might possess. Such a program would concentrate on the precise specifics necessary to enable the retrainee to perform effectively in his specialty area.

5. Offering classes in the evening hours as a part of the regular curricula from which day students would not be excluded since mutual benefits might be derived by both groups from the exposure.

In the foregoing paragraphs, items one, three, and four are matters which involve administrative detail beyond the scope of this paper. But with reference to item two, this would require a well-developed advertising campaign to reach the target groups. After a person has been excited to the point of writing for a catalog and/or the brochure of particular programs, a taped description and question and answer series might also be made available to expand upon the catalog or brochure description as a means of additional motivation applied to the enquirer. For this purpose a series of tapes might be produced that fully describe each of the Ferris programs as to admissions requirements and educational content. They could be sent to those interested upon the deposit of a small fee or be placed on deposit with local school officials.

The real barrier for this group lies in the failure to provide instruction at hours when it is possible for them to attend classes, as has already been indicated. While the institution of evening classes might

appear at first glance to both administrative and faculty members to be a major departure from accustomed programming, the adjustment for both might be very much easier than expected. Indeed, by permitting the enrollment of full-time students in such classes, better programming for them might well result. Also, the presence on campus, even for a few hours each day, of highly-motivated, mature students, could have a positive influence upon the young, full-time students.

Recommendations

1. That a review be undertaken of the technical programs being given in other schools similar to Ferris in the fields which Ferris services to identify new programs being initiated elsewhere which might be suitable to the objectives and facilities of Ferris.
2. That an "advertising" campaign, sustained as to time, and featuring each of the Ferris programs which relate to educational opportunities for career change, be considered.
3. That the catalog be supplemented by both tapes and brochures so that the most complete descriptions, not only of the programs, but also of the career possibilities, can be obtained for individual and group use.
4. That the advisement and counseling services be alerted to possible psychological needs of the subject group.
5. That a study be made of Ferris entrance requirements to each of the curriculums to determine which might be safely modified in particular cases and the degree of flexibility which can safely be established.

6. That the present daily hours of instruction be extended to a fourteenth period (9:00 p.m.) for a trial period to assess the degree of demand existing in the Ferris region by the subject group for night classes.

SECTION VI

THE COMMON LEARNINGS MODEL

Preface

The Ferris State College role statement explicitly states that the aim of the institution is not merely to turn out skilled technicians and professionals but to prepare educated citizenry whose obligation to society does not end at the work benches or office desks. The proposed Common Learnings program development model is in accord with the present Ferris institutional policy which provides an opportunity for students to obtain credit for courses by successfully completing their course requirements through competency examinations. The proposed procedure may be viewed as a refinement of this challenge system with a more specific delineation of departmental responsibility. The core of Common Learnings or General Education is provided to insure a grasp of as many areas of man's knowledge as possible. Areas of studies include: Language and Literature, Man's Cultural Heritage, Man's Natural Environment, Man's Social Relations, and Man's Aesthetic Experience.

The Model

Most four year institutions with lesser commitments to career preparation than Ferris State College require an average of 37% of their degree requirements in general education. In view of the strong commitment of Ferris to occupational preparation, the Educational Planning Committee recommended that a minimum of 20% of the academic work of each institutional program should be in the Common Learnings area. In Section III, Guidelines for Program Evaluation[1], a total of 22 quarter hours of general education courses are recommended for associate degree programs and 42 quarter hours for baccalaureate degree programs.

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[1] Educational Planning Committee Studies, Paper no. 6, p.2. On reserve at delivery desk, Ferris Library.

The specific subject recommendations include:

	On Quarter Basis		On Semester Basis	
Subject	A.S.	B.S.	A.S.	B.S.
Communicative Skills	6	9	4	6
Mathematics and Science	4	12	3	8
Social Science, Humanities	6	15	4	9
Electives	6	6	4	4

These recommendations are suggested only as guidelines. The faculty engaged in curriculum developement and revision would gain more from clearly stated performance objectives for each of the above mentioned common learnings than from the currently accepted practice of specified credit hour requirements in Literature, Mathematics, Science, Communicative Skills, Social Sciences, etc. The emphasis on performance objectives as opposed to credit hour requirements may allow some students to meet their humanities requirement for example in one term while other students may take longer.

It is recommended that serious consideration be given to establishing performance objectives for Common Learnings on an individual basis by subject specialists. Such educational prescription can be made after diagnostic tests have revealed the relative competence of the respective subject fields. The current method of prescribing the same amount of class work for all students falsely assumes that they are all at the same maturation level. This system also accepts the tenet that specialists and experts in a particular subject field also have the background and knowledge to determine the composition and necessary elements of the Common Learning block of each academic program. The above-suggested method of establishing performance objectives for each student represents a clear and significant departure from the present system.

Hopefully the curricular prescriptions of the specialists in humanities, music, language, arts, and social sciences will be accepted in the same cooperative fashion by the faculty as are the current recommendations based on placement examination scores.

Trends in Higher Education

In reviewing current Common Learnings trends in higher education, we note that there are definite trends toward the reduction in specific requirements in particular subjects but the overall pattern of general and concentration requirements has changed but slightly. The result is that students have some increased degree of flexibility in how they fulfill requirements. For example, the expansion of study abroad which might have been expected to increase foreign language studies greatly has expanded to improve many opportunities in which no foreign language facility is required.

The most marked curricular changes are in those aspects which have been labeled as individualization: study abroad, work study, community service, honors, independent study, competency examinations. Large numbers of institutions are currently providing such curricular options. There are relatively few institutions which have reduced or eliminated traditional requirements to provide the necessary flexibility. However, despite all of the talk about innovation, common learnings curricular requirements as a whole have changed remarkably little.

Suggested Procedural Steps for Common Learnings Curriculum Developers:

1. Performance Objectives

Performance objectives should be stated in terms of expected student capabilities at the end of the respective educational experience. The statement should detail what the students need to know or do, or both, in order to meet the minimum standards of the course of subject area.

2. Instructional Aids

The material and aids as well as the nature of the problems with which the students will be confronted should reflect the cognitive (thinking), affective (feeling) and psychomotor (doing) areas of learning.

3. Learning Elements

The instructional strategies should involve multi-media stimulation, multi-mode forms of learners' interaction and multiple activities structured to accommodate the successful attainment of each objective.

4. Environmental Aspects

The conditions under which the educational experience is performed to attain the performance objectives should be broad enough for students to gain proficiency through other than regular classroom experience.

Recommendations

1. That the equivalent of a minimum of 20 percent of the academic work of each curriculum be in the Common Learnings area of communication arts, behavioral science, humanities, and the natural sciences and mathematics.
2. That through a realistic assessment program, capable students be granted credit if they demonstrate mastery of a specific subject field.
3. That alternate means to standard academic course work, for attaining subject matter proficiency, be researched and allowed to enable the student to meet the performance objectives of each course. Such alternate means as travel and study abroad, work experience, and independent study are indicated.

Related Readings and Bibliography

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SUMMARY OF THE RECOMMENDATIONS

To maximize the comprehension and the utility of the foregoing sections, the recommendations are arranged below according to the administrative activity to which each has the greatest pertinence:

Admissions and Admissions Mechanics

1. That Ferris should be prepared, financially and programmatically, to serve adequately all students who are accepted for admission.
2. That the administration study the desirability and appropriateness of requiring all students who have placement test scores below a particular level, or other evidence of need, to take recommended remedial courses.
3. That, to enhance its effectiveness, Project Apollo be expanded to a size commensurate with the need; and be publicized to all current and prospective students, and to the faculty.
4. That an "advertising" campaign, sustained as to time, and featuring each of the Ferris programs which relate to educational opportunities for career change, be considered.
5. That the catalog be supplemented by both tapes and brochures so that the most complete description, not only of the programs, but also of the career possibilities, can be obtained for individual and group use.
6. That a study be made of Ferris entrance requirements to each of the curriculums to determine which might be safely modified or relaxed in particular cases and the degree of flexibility which can safely be established.

7. That admission procedures be reviewed so that marginal students are informed of the extent of additional course work they must take. It is also recommended that students who have a minimal chance of entering the program for which they are seeking admission either be denied admission or counselled to choose a program more compatible with their qualifications.

Advisement, Counseling, Other Student Assistance

1. That Project Apollo be expanded to a size commensurate with need, be publicized to all current and prospective students and to the faculty to enhance the effectiveness of the program.
2. That the opportunity for college-supported tutoring be extended to all students who recognize the need for tutoring or for whom faculty advisors recommend tutoring.
3. That the advisement and counseling services be alerted to possible psychological needs of the subject group.

General Administration

1. That any future version of the role statement be amended to delete negative or limiting words which refer to the aspirations of the college.
2. That the opportunity for college-supported tutoring be extended to all students who recognize the need for tutoring and for whom faculty advisors recommend tutoring.
3. That the present daily hours of instruction be extended to a fourteenth period (9:00 p.m.) for a trail period to assess the degree of demand existing in the Ferris region for night classes.

General Administration, the Student Credit Factor

1. That specific time requirements be removed from programs stressing the principle that graduation should be based on the attainment of proficiency and competence in the chosen subject area.
2. That students who pass comprehensive placement examinations for credit be awarded advanced standing on a campus-wide basis and that more students be encouraged to take advanced placement examinations.
3. That students of high ability be encouraged to "test" some of the basic courses on a P-F basis and to carry extra courses under faculty advisement to enable them to progress faster.
4. That, through a realistic assessment program, capable students be granted credit if they demonstrate mastery of a specific subject field.
5. That alternate means to standard academic work, for attaining subject matter proficiency, be researched and allowed to enable the student to meet the performance objectives of each course. Such alternate means as travel and study abroad, work experience, independent study are indicated.

Programming

1. That in the development of new program proposals, program framers should consult the most recent Department of Labor manpower projections and the current state of emphasis on the various national goals and the other resources mentioned in the paper. Projections by individual professional societies should not be neglected.

2. That the present United States and world social and technological turbulence be fully recognized and studied by program framers for their implications for particular programs being proposed and that guidance be found in the Bureau of Labor Statistics postulates as cited in this study.
3. That, in considering future employments in relation to proposed programs, the program framer be warned to study carefully currently emerging facts being revealed by the ecological crisis: (1) the question of population control; (2) the cost to society of environmental improvement and its effects on all levels of business; (3) the questioning of economic growth itself as a public and private goal with implications for change in contemporary academic disciplines.
4. That serious consideration be given to the growing need for education related to the use of leisure time. Such educational programming may include the study of serious and nonserious subjects within the Ferris educational framework--beyond what is now being provided in the Community Adult Educational Program.
5. That all schools consider providing such education to the extent resources and program content permit and that the administration of such activity be lodged with the School of General Education.
6. That the current offerings in the Community Adult Education Program be expanded. Courses helpful to home and equipment maintenance and family health, for example, could be added.
7. That, within the concept of extension education, formal courses, within the several disciplines offered in all of the Ferris schools, be made available with or without stated certificate or degree objectives on the part of the student.

8. That a review be undertaken of the technical programs being given in other schools similar to Ferris in the fields which Ferris services to identify new programs which might be suitable for the objectives and facilities of Ferris.
9. That the equivalent of a minimum of 20 percent of the academic work of each curriculum be in the Common Learnings areas of communication arts, behavioral science, humanities, and the natural sciences and mathematics.
10. That duplication of course work be eliminated by more careful screening of proposed courses by the departments involved and by the Committee on Instruction.
11. That consideration be given to the development of "vacation workshops"--workshops of two to four weeks that will attract persons who want to prepare for some type of leisure-time activity.